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November 7, 2004, 05:23:17; Search time 8805 Seconds (without alignments) 11214.184 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.
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                                                             OM nucleic - nucleic search, using sw model
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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÷	Description	AB008464 Zea mays								١.	AX653870 Sequence			AK073105 Orvza sat			Tritic		Orvza	Zea ma
SUMMARIES	a :	AB008464	AF408843	AF408842	BT009324	HVU272309	AF408844	BT009233	AK100027	D87819	AX653870	AB071809	AC149831	AK073105	AB091674	AK109355	BT009200	AY137242	AB091673	AY581895
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eke (Query	63.2	51.4	51.3	51.3	50.9	50.7	50.4	48.9	48.7	45.9	38.9	35.7	29.1	28.9	27.1	22.7	19.0	18.9	18.5
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ALIGNMENTS

RESULT 1 AB008464	
LOCUS	AB008464 11834 bp mRNA linear PLN 23-MAY-2003 Zea mays mRNA for Sucrose Transporter, complete cds.
ACCESSION VERSION	AB008464 AB008464.1 GI:5771353
KEYWORDS	an
SOURCE	Zea mays
CAGAINLOIM	Dea mays Enkarwots - Viridialentse, Strontonhitt: Embassahitt. Beschesti
	Banaryota, viilutpiantae; Streptopnyta; Embryopnyta; Iracneopnyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
	clade; Panicoideae; Andropogoneae; Zea.
REFERENCE	
AUTHORS TTTIR	
	transporter in maire (700 mays 1).
JOURNAL	timisporter in maize (sea mays E.) Plant Cell Physiol 40 (10) 1072-1078 (1999)
MEDLINE	20056970
PUBMED	10589520
REFERENCE	2 (bases 1 to 1834)
AUTHORS	Aoki, N.
TITLE	Direct Submission
JOURNAL	Submitted (24-OCT-1997) Nachiro Acki, Japan International Research
	Center for Agricultural Sciences, Biological Resources Division;
	1-2 Ohwashi, Tsukuba, Ibaraki 305, Japan
	(E-mail:naoki@ss.jircas.affrc.go.jp, Tel:81-0298-38-6305,
	Fax:81-0298-38-6650)
FEATURES	Location/Qualifiers
source	11834
	/organism="Zea mays"
	/mol_type="mRNA"
	/db_xref="taxon:4577"
gene	11834
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CDS	1681733
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	/product="Sucrose Transporter"
	/protein_id="BAA83501.1"
	/ WALTER GISTON / ISSUED AND CHOOSE AND
	/ CIRTRIBLACIONE - MARGOGEDEDS VG VRGIGGGAAAAANH VARISDGKUL DAGMVA GGVOYGWALOLSILTPYVOOT GLSHALTFRAMMI GGDIAMODI WAT VADDUMADWA
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Triticum aestivum (bread wheat)

Triticum aestivum

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Pooideae; Triticaee; Triticum.

1 (bases 1 to 2021)

S Aoki, W., Whitelad, P.R., Hoeren, F., Scofield, G.N., Newell, K.,

Patrick, J., Offler, C., Clarke, B., Rahman, S. and Furbank, R.T.

Three sucrose transporter genes are expressed in the developing grain of wheat

L Plant Mol. Biol. (2002) In press

L Dasses 1 to 2021)

Aoki, N., Whiteld, P.R., Hoeren, F., Scofield, G.N., Newell, K.,

Patrick, J., Offler, C., Clarke, B., Rahman, S. and Furbank, R.T.

Direct Submission

Submitted (13-AUG-2001) Division of Plant Industry, CSIRO, GPO BOX AF408843 2021 bp mRNA linear PLN 16-APR-2002 Triticum aestivum sucrose transporter SUT1B mRNA, complete cds. AF408843 1366 1338 1426 1486 1458 1546 1518 1606 1578 1666 1638 1726 1698 1218 1306 1278 1339 TCAGCTTCTGGTCGCTCAAGGACTACCACGGATACGTGCAGGACGCCATCACCGCCAGCA 1398 1246 CCGGCCGCCGCCACGCAAGAGCTGTATGTTGTTGAGAGTTGAACAGAA 1833 cacdecedecadecedadecendendedantantananaricaaacadaa 1814 1279 GGGTGGTGTGTGTGACGACGAACTTCATGGTCTGCGTCGCCATGGCGGCCACGCGCTGA TCAGCTTCTGGTCGCTCAGGGACTACCACGGGTACGTGCAGGACGCCATCACCGCGAACG 1579 GCGCGGCCCGTGGGCGCCGCTGCTCGCCAAGGGGAACATCCCGGCGTTCGGCGTGGCGT COGITATICIAGGGITCAGCICGTICCTGATCGAGCCCCATGIGCCGGAAGGICGGGCCGA ccagcarcaaggccercricarcriciringgcricaggcgriccricarccarcc 1399 CGAGGATCAAGGCCGTCTCGTCCTCTTCGCGTTCCTGGGTGTCCTCTCGCCATCTCC TGTACAGCGTCCCGTTCGCGGTGACGGCGCAGCTGGCGGCCACCCGGGGCGGCGGCAGG regggergeracteaact cecagarerogecerreaacgaaggrerocgagregecerr AF408843.1 GI:20152872 1159 1247 1307 1367 1427 1487 1459 1607 1667 1639 1727 1699 1778 1759 1187 LOCUS
DEFINITION
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ORGANISM JOURNAL REFERENCE AUTHORS REFERENCE AUTHORS TITLE JOURNAL RESULT 2 AF408843 TITLE ð ≿ ð ≈ д ⋩ > A Ω ≿ Ω ≿ Α Α

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BT009324 GI:32128875
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Trificum aestivum (bread wheat)

Triticum aestivum (bread wheat)

Triticum aestivum

Triticum aestivum

Embryophyta; Tracheophyta; Streptophyta; Embryophyta; Poaceae;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Pooideae; Triticeae; Triticum.

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1 (bases 1 to 2150)
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Caraher, N.R., Hanafey, M.K. and Hainey, C.F.
Direct Submission
Submitted (20-JUN-2003) Crop Genetics, E. I. DuPont de Nemours an Company, 1 Innovation Way, P.O. Box 6104, Newark, DE 19714-6104, USA
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GCGGGCGGCCACTGATCGAACCCGGCCGGGCCGGCC
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/organism="Triticum aestivum"
/mol type="mRNA"
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                      mRNA linear PLN 22-FEB-2000 transporter 1 (sut1 gene).
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                                                                    sucrose transporter; sutl gene.
Hordeum vulgare subsp. vulgare
Bukaryota; Viridiplantee; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
                                                                                                                                                                Weschke, W., Panitz, R., Sauer, N., Wang, Q., Neubohn, B., Weber, H. and
                                                                                                                                                                                          Sucrose transport into Barley Seeds: Molecular Characterisation of two Transporters and Implications for Seed Development and Starch
                                                                                                                                                                                                                                                                         Direct Submission
Submitted (21-FEB-2000) Weschke W., Molecular Genetics, Institut
fuer Pflanzengenetik und Kulturpflanzenforschung, Corrensstr.3,
Gatersleben 06466, GERMANY
Location/Qualifiers
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Pred. No. 1.4e-139;
0; Mismatches 314; Indels 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                function="Transport sucrose through membrane"
                                                                                                                                                                                                                                                                                                                                                     'organism="Hordeum vulgare"
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/country="Germany"
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vulgare mRNA for sucrose
                                                                                                                                          Pooideae; Triticeae; Hordeum.
                                                                                                                                                                                                                                                                                                                                                                  /mol_type="mRNA"
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                                       Hordeum vulgare mRNA fc
AJ272309
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ilarity 80.0%;
Conservative
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1080 1260 1379 1320 1439 1380 1020 1139 1199 1140 1319 1079 1259 1019 959 903 096 719 663 779 723 839 783 899 843 479 483 599 543 629 603 363 423 GACGAGCAACTTCATGGTCTGCGTCGCCCATGGCGGCCACCGCGCTGATCAGCTTCTGGTC 1380 GCTCAGGGACTACCACGGGTACGTGCAGGACGCCATCACGGCGAACGCCAGCATCAAGGC 1321 TACTCAĞĞACİTGÖATĞĞĞİACAİCCAĞCAĞCCATCACĞĞCCAĞCAAĞĞAAATCAAĞĞĞ 960 GIACAGAGCGAACGAGAACCICCCGACGAAGGCCGGCGGCGAGGICGAGACTGAGCC 904 CTACAAGGCGATTGCGCCCCTCCC---AACAAAGGCCAATGGCCAGGTGGAAGTCGAGGC TACCGGTCCGCTCGCCGTCTAAAGGCTTCAAGAACTTGCCTCCCGGAATGCCATCGGT GCTCCTCGTGACTGCCTTGACCTTGGCTTCCCGTTCATCCTCTACGACACACGA CTGGATGGGCCGGGAGATCTACCACGGCGACCCCAAGGGGAGCAACGCCCAGATCTCGGC GITCAACGAAGGIGICCGAGICGGCGCTICGGGCTGCTACTCAACTCGGTTAITCIAGG 1141 driccaddaaddrigicaddccddagcdricddigdccicaacicdaach 664 idalitraicadcocaacaideacceadrocideaaricaariciiciderideardoc 724 ACTAGGAAATATCCTAGGATACTCCTCGGTTCAACAAATAACTGGCACAAGTGGTTTCC 840 CITCCITAAAACGAGCGCCIGCTGTGAGGCCIGIGCGAACCTGAAAGGTGCAITICTGGI 900 gecegnegrarycaradracygracorgacedraaccarearcriceccaaegaegreco 844 ĠĠĊAĠĦĠĊŦĠŦŦĊĊŦĠŦĊĊŦŦAGGŦŦĬĠĠŦĠAŦĀĀĊŦĊŦĠĀŦĊŦŦĊĠĊĊĀĀĠĀĀĠĀĠĠŦĠĊŦ GIICAGCICGIICCIGAICGAGCCCAIGIGCCGGAAGGICGGGCCGAGGGIGGIGIGGGI ccrectacecctacerccacactriciti GCTCTGCGGCCCTATTGCCGGCTTAGTGGTCCAACCGCTGGTTGGCCTGTACAGCGACAG 364 derengedeceratiaeredatiangeredadecargedinggerietaera egaagagrecicrarcargagecregirgecaegerrecarrerargrangures GITITIGGCICCITGACITCICCAACAACAACIGIGCAGGGICCAGCACGIGCIAIGAIGGC 604 arrcrecircirelacircrecaleacacierecaledaesicales crirccrecesacaadecrirecreraadeccrececaaarcreaaadececarrireregr GTGTACATCGAGATGGGGGAGACGGAGGCCGTTTATCCTGACAGGGTGCATGCTCTG CGTTGCCGTCATTGTTGTCGGATTCTCGTCAGACATCGGAGCTGCTCTAGGGGACACGAA cerrecrereareareacerrecreacersacarresacersecresecerracea GGAACACTGCAGCCTCTACCACGGTCCTCGCACGCTGCGATCGTGTACGTTCTGGG TGATCTATGTGACCATCATGGGCCAAGTGCGGCTAACTCCATCTTCTGTTCTTGGATGGC GCTGGGAAACATCCTAGGCTACTCCTCGGCTCCACGAACAATTGGCACAAGTGGTTTCC

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                                                                                                                                                        GCTCATCCTCGCCGGCATGGTCGCCGGCGGCGGCAGTACGGCTGGGCGCTGCAGCTCTC
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                                                                                                                                                                                                                                         CCTCCTCACGCCCTACGTGCAGACTCTGGGGCTTTCACATGCGCTCACTTCATTTCATGTG
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        Pred. No. 5e-139;
0; Mismatches 302;
        Best Local Similarity 80.4%;
Matches 1253; Conservative
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2 Aoki,N., Whitfeld,P.R., Hoeren,F., Scofield,G.N., Newell,K.,
Patrick,J., Offler,C., Clarke,B., Rahman,S. and Furbank,R.T.
Three sucrose transporter genes are expressed in the developing
grain of wheat
Plant Mol. Biol. (2002) In press
2 (bases i to 2106)
Aoki,N., Whitfeld,P.R., Hoeren,F., Scofield,G.N., Newell,K.,
Patrick,J., Offler,C., Clarke,B., Rahman,S. and Furbank,R.T.
Direct Submission
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                          CATCGGCGGCGTCGTCGGCATATTCCTGCTGCCCAAGATCTCCAGGCGCCCAGTTCCGGGC
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CGTCTGCCTCGTCCTTCGCCTTCCTGGGCGTCCCTCTCGCCATCCTGTACAGCGTCCC
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230_ 1801
/note="darrier protein; TaSUTID"
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Pooideae, Triticeae, Triticum.
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Score 1058.8;

50.7%;

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329 ACTCATCCTCGCCGGCATGCTGCGGCGCGCTGCATGCGCTCCCAGCTCTC 388 360 CCTCCTCACCTCACGTGCAGACTCTGGGGCTTTCACATGCGCTCCTCATCATTCAT		660 GTTTTGGCTCCTTGACTTCTCCAACAACTGTGCAGGGTCCAGCACGTGCTATGATGGC 719 689 ATTCTGGCTCCTTGACTTCTCCAACAACTGTGCCAAGGTCCAGCGGTGCTCTGATGGC 748 720 TGATCTTGTGACCATCATGGGCCAAGTGCGGCTAACTCTCTGTTCTTGGATGGC 779 749 TGATCTATCAGCTCAAGCATGGACCCAGTGCAGCTCAACTCTCTGTTCTTGGATGGC 779 749 TGATTTATCAGCTCAGCATGGACCCAGTGCAGCAATTCAATCTTCTTGTTCTTGGATGGC 808	780 GCTGGGAAACATCCTAGGCTACTCCTCGGACAAATTGGCACAAGTGGTTTCC 839	95 98 10 10	CACCGGGCCGCTCGTGTTCAAAGCTTCAAAAACTTGCCTCCTGCAAATGCCGTTCGTT	125	1286 GTTCAGCTCGTTCTGATCGAGCGGCTGCGAGGCCTAGGCCGGGGGGGG
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Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Exploration Research Group in Riken. Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S., Hangawa,K., Hara,A., Hashizume,W., Hayashida,K., Hayatsu,M., Hiramoto,K., Itoh,M., Kagawa,I., Kanagawa,S., Katoh,H., Kawai,J., Kondo,S., Kondo,S., Konno,H., Kouda,M., Koya,S., Kurihara,C., Matsuyama,T., Miyazaki,A., Murata,M., Nishik,K., Nomacaki,A., Murata,M., Nishik,K., Nomacaki,R., Sakach,M., Sano,H., Sakai,C., Sakai,K., Sakazume,N., Nishik,K., Sakai,K., Sakazume,N., Nishik,K., Tagawa,A., Shiraki,T., Sasaki,D., Sato,K., Shibata,K., Shinagawa,A., Shiraki,T., Takaku-Akahira,S., Tanaka,T., Tomaru,A., Tayawa,A., Takahashi,F., Yasunishi,A. and Hayashizaki,Y.
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NIAS Rice Full-Length cDNA Project Team: Kikuchi,S., Satch,K.,
Nagata,T., Kawagashira,N., Doi,K., Kishimoto,N., Yazaki,J.,
Ishikawa,M., Yamada,H., Ooka,H., Hotta,I., Kojima,K., Namiki,T.,
Chneda,E., Yahagi,W., Suzuki,K., Li,C., Ohtsuki,K., Shishiki,T. and
Yamamoto,M.
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Submitted (27-AUG-2002) Shoshi Kikuchi, National Institute of
Agrobiological Sciences, Department of Molecular Genetics, Head of
Laboratory of Gene Expression; 2-1-2 Kannondai, Tsukuba, Ibaraki
305-8602, Japan (E-mail:skikuchi@nias.affrc.go.jp,
This clone is one of the 28K full-length cDNA clones from japonica
                             Namiki,T., Narikawa,R., Niikura,J., Nishi,K., Nomura,K.,
Numasaki,R., Ohneda,E., Ohno,M., Ohtsuki,K., Oka,M., Ooka,H.,
Osato,N., Ota,Y., Otomo,Y., Ryu,R., Saitoh,H., Sakai,C., Sakai,K.,
Sakatume,N., Sano,H., Sasaki,D., Sato,K., Satoh,K., Shibata,K.,
Shinagawa,A., Shiraki,T., Shishiki,T., Sogabe,Y., Sugano,S.,
Sugiyama,A., Suzuki,K., Suzuki,Y., Tagam.,M., Tagam.-Takeda,Y.,
Tagawa,A., Takahashi,F., Takku-Akahira,S., Tanaka,T., Tomaru,A.,
Toya,T., Tsunoda,Y., Uada,M., Waki,K., Xie,Q., Yahagi,W.,
Yamada,H., Yamamoto,M., Yasunishi,A., Yazaki,J., Yokomizo,S. and
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/mol type="mRNA"
/cultivar="Wipponbare"
/db xref="taxon:39947"
/clone="J013146J01"
Murata, M., Nagata, T., Nakamura, M.,
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Oryza sativa (japonica cultivar-group) cDNA clone:J013146J01, full
insert sequence.
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FLI_CDNA; CAP trapper.
Oryza sativa (japonica cultivar-group)
Oryza sativa (japonica cultivar-group)
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Permatophyta; Magnollophyta; Liliopsida; Poales; Poaceae;
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GGGGGGGGLELSYGVGGGGARGGGGGEAAAVETA
LQLSLLTPYVQTLGLSHALTSFWMLCGPIAGWVVQ
GCVLICLAVVV1GSADLGYAMGOTKEDCSVYHGS
GRARALMADLSGRHGPGTANSIFCSWWAMGNILGY
CANIKGAPLVAVIFLSLCLVITLIFAKEVPFKGNA
FRNLPTGYPSVLIVTGLTWLSWFPFLIYDTDWMGR
GAPGLLINSIVLGYSSFLIEPMCRKVGPRVWYTS
GAPGLLINSIVLGYSSFLIEPMCRKVGPRVWYTS
GTVQRAITADKSIKAVCLVLFARLGYPLAVLYSVP
ISIVIPQVVIALGAGPWDELFGKGNIPAFLSEVS
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ab. of Rice Metabolism;
, Japan
55-26-8300, Fax:0255-24-8578)
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Patent: Wo 030000898-A 3740 03-JAN-2003;
Syngenta Participations AG (CH)
Location/Qualifiers
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Poaceae;
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                               TTCAACGAAGGTGTCCGAGTCGGCGTTCGGGCTGCTACTCAACTCGGTTATTCTAGGG
                                                                      TTCAACCAGGGTGTCAGGCAGGTGCATTTGGCCTGCTACTGAATTCGATTGTGCTAGGA
                                                                                                                      TTCAGCTCGTTCCTGATCGAGCCCATGTGCCGGAAGGTCGGGCCGAGGGTGGTGGGGTG
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Spermatophyta, Magnoliophyta, Liliopsida,
Ehrhartoideae, Oryzeae, Oryza.
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/db_xref="taxon:4530"
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Birren, B., Nusbaum, C., Lander, B., Butler, B., Wing, R., Bharti, A.K.
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Cook, A., Cooke, P., Corum, B., DeArellano, K., Diaz, J.S., Dodge, S., Fitzgerald, M., Gage, D., Erickson, J., Farco, S., Ferreira, P., Fitzgerald, M., Gage, D., Galagan, J., Gardyna, S., Graham, L., Grand-Pierre, M., Hagropian, D., Hagos, B., Hall, J., Grand-Pierre, M., Hagropian, D., Hagos, B., Hall, J., Kartas, A., Kells, C., Landers, T., Levine, R., Jones, C., Kamar, A., Karatas, A., Kalls, C., Landers, T., Levine, R., Undblad-Toh, K., Iul, X., Lul, A., Mabblit, R., Maclean, C., Madchanld, P., Major, J., Mathews, C., McCarth, M., Meldiad-Toh, R., Mahones, L., Mihova, T., Mlenga, V., Murph, T., Naylor, J., Nguyen, C., Nguyen, T., Nicol, R., Norbl, C., O'Connor, T., O'Donnell, P., O'Neil, D., Oliver, J., Schubs, R., Setta, R., Rise, C., Rogov, P., Ramsamy, U., Raymond, C., Retta, R., Rise, C., Rogov, P., Roman, J., Schauer, S., Schauer, S., Schauer, S., Schauer, S., Schauer, S., Theodore, J., Topham, K., Travers, M., Talamas, J., Tesfaye, S., Theodore, J., Topham, K., Travers, M., Vassiliev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X., Wassiliev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X., Vassiliev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X., Wassiliev, H., Venkataraman, V.S., Viel, R., Vo, A., Wilson, B., Wu, X., Viel, R., Connor, M. Stopats, Wasker:

Submitted (22-JUN-2004) Whitehead Institute/MIT Center for Genome Smit, A.F.A. & Green, P. (1995-1997)

http://ftp.genome.washington.edu/RM/Repeatmasker:html
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bharti, AK and Messing, J: The Plant Genome Initiative at Rutgers, Waksman Institute, Rutgers, The State University of New Jersey, 190 Frelinghuysen Road, Piscataway, NJ 08854, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTGTTCCTAGTCCTGTGCCTGACGTAACCCTGATCTTCGCCAAGGAGGTGCCGTACAG
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Center: Whitehead Institute/MIT Center for Genome Research
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NOTE: This is a 'working draft' sequence. It currently consists of 4 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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/organism=Zea mays"
/oultivar="B73" 4577"
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/clone_lib="CHORI-201 Maize B73 BAC Mbol Library"
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Pred. No. 5.1e-95;
0; Mismatches 2; Indels 349; (
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Contact: sequence_submissions@broad.mit.edu
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76.2%;
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URE: http://cdnaol.dna.affrc.go.jp/cDNA/
NIAS Rice Full-Length cDNA Project Team: Kikuchi, S., Satoh, K.,
Nagata, T., Kawagashira, N., Doi, K., Kishimoto, N., Yazaki, J.,
Ishikawa, M., Yamada, H., Oka, H., Horta, I., Kojima, K., Namiki, T.,
Ohneda, E., Yahagi, W., Suzuki, K., Li, C., Ohtsuki, K., Shishiki, T. and
Yamamoto, M.
FAIS Genome Sequencing & Analysis Group: Otomo, Y., Iida, Y.,
Fujimura, T., Kursaki, T., Kusunegi, T., Liu, M., Masuda, M.,
Mizuno, K., Narikawa, R., Niikura, J., Oka, M., Ryu, R., Sugano, S.,
Sugiyama, A., Suzuki, Y., Tsunoda, Y., Udad, M., Xie, Q., Yokomizo, S.,
Voshimura, A., Marsubara, K. and Murakami, Xie, Q., Yokomizo, S.,
Voshimura, A., Matsubara, K. and Murakami, Xie, Q., Yokomizo, S.,
Voshimura, A., Matsubara, K. and Murakami, J., Aizawa, K.,
Akimura, T., Arakawa, T., Carninci, P., Pukuda, S., Hanagaki, T.,
Akimura, A., Hashizume, W., Hayashida, K., Hayatsu, N., Haramoto, K.,
Hiraoka, T., Hori, F., Iida, J., Imamura, K., Imotani, K., Ishii, Y.,
Itoh, W., Kagawa, I., Kahagawa, S., Katoh, H., Kawai, J.,
Kishikawa-Hirozane, T., Nomura, K., Numasaki, R., Ohno, M.,
Ota, Y., Tagami, M., Namura, K., Shinagawa, A., Salch, H.,
Sasaki, D., Sato, K., Shibata, K., Shinagawa, A., Shiraki, T.,
Sasaki, D., Sato, K., Shibata, K., Shinagawa, A., Takahashi, F.,
Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Waki, K.,
Yasunishi, A., Takahizi, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (05-DEC-2001) Shoshi Kikuchi, National Institute of Agrobiological Sciences, Department of Molecular Genetics, Head of Laboratory of Gene Expression; 2-1-2 Kannondal, Tsukuba, Ibaraki 305-8602, Japan (E-mail:sKluchi@mias.affrc.go.jp, Tel:81-29-838-7007, Fax:81-29-838-7007, Tel:81-29-838-7007, Fax:81-29-838-7007, Fa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                289 AGCCTCGGGAGGCTCATCCTCGCCGGCATGGTCGCCGGCGGGGGGGTGCAGTACGGCTGGGCG 348
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         349 CIGCAGCICICCCICACGCCCIACGIGCAGACICIGGGGCTITCACAIGCGCTCACI
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/db xref="taxon:3994"
/clone="J033024A07"
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Pred. No. 7.4e-76;
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Oryza sativa (japonica cultivar-group)

Oryza sativa (japonica cultivar-group)

Bukaryota, Viridiplantae, Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Ehrhartoideae; Oryzeae; Oryza.
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Oryza sativa (japonica cultivar-group) OsSUT5 mRNA for sucrose transporter, complete cds.
AB091674.1 GI:29467455
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Oryza sativa (japonica cultivar-group)
Eukaryota, Viridiplantaa, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnollophyta, Liliopsida, Poales, Poaceae,
Ehrhartoldeae, Oryzeae, Oryza.
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/mol type="mRNA"
/cultivar="Nipponbare"
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Fals Genome Sequencing & Analysis Group: Otomo, Y., Iida, Y.,
Fujimura, T., Ikeda, R., Ishibiki, J., Kawamata, M., Kobayashi, M.,
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Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M.,
Nakamura, M., Nishi, K., Nomura, K., Numasaki, R., Sakazume, N., Sano, H.,
Sasaki, D., Sato, K., Shibata, K., Shinagawa, A., Takahashi, F.,
Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toya, T., Waki, K.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIAS Rice Full-Length cDNA Project Team: Kikuchi,S., Satoh,K., Nagata,T., Kawagashira,N., Doi,K., Kishimoto,N., Yazaki,J., Ishikawa,M., Yamada,H., Ooka,H., Hotta,I., Kojima,K., Namiki,T., Ohneda,E., Yahagi,W., Suzuki,K., Li,C., Ohtsuki,K., Shishiki,T. and Yamamoto,M.
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Numasaki, R., Ohneda, B., Ohno, M., Ohtsuki, K., Oka, M., Ooka, H., Osato, N., Ota, Y., Otomo, Y., Ryu, R., Saitoh, H., Sakai, C., Sakai, K., Sakaine, N., Satoh, K., Shibata, K., Shinagawa, A., Shiraki, T., Shiahiki, T., Sogabe, Y., Sugano, S., Sugiyama, A., Suzuki, K., Suzuki, Y., Tagami, M., Tagami-Takeda, Y., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Tanaka, T., Tomaru, A., Toway, Y., Tsunoda, Y., Ueda, M., Waki, K., Xie, Q., Yahagi, W., Yasumiada, H., Yamamoto, M., Yasunishi, A., Yazaki, J., Yokomizo, S. and Yoshimura, A.
                                                                                                                                                                                                                                                                                             Submitted (27-AUG-2002) Shoshi Kikuchi, National Institute of Agrobiological Sciences, Department of Molecular Genetics, Head of Laboratory of Gene Expression, 2-1-2 Kannondai, Tsukuba, Ibaraki 305-8602, Japan (E-mail:skikuchi@nias.affrc.go.jp, 1-161-8-29-8184-0707, Fax:81-29-818-7007) On Peb 26, 2004 this sequence version replaced gi:12994564. This clone is one of the 28K full-length cDNA clones from japonica
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Sequence 1, Application US/08786555B

Patent No. 598181

GENERAL INFORMATION:

APPLICANT: RECOMMER, Wolf-Bernd

APPLICANT: RIESMEIR, Jorg

TITLE OF INVENTION: DELASHIDS, BACTERIA AND PLANTS CONTAINING A TRANSPORTER;

TITLE OF INVENTION: OF YEAST STRAINS FOR PREPARATION AND TRANSFORMATION

TITLE OF INVENTION: OF YEAST STRAINS FOR THE IDENTIFICATION

FILE OF INVENTION: OF YEAST STRAINS FOR THE IDENTIFICATION

FILE OF INVENTION: OF YEAST STRAINS FOR THE IDENTIFICATION

FILE SPERENCE: Frommer

CURRENT APPLICATION NUMBER: US/08/786,555B

CURRENT PALING DATE: 1994-12-21

FEARLIER APPLICATION NUMBER: PCT/EP93/01604

EARLIER PILING DATE: 1993-06-22

FEARLIER FILING DATE: 1993-06-24

NUMBER OF SEQ ID NOS: 11

SOFTWARE: PARENTEIN VOY: 2.0

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                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                            90;
                                                                                                                                                                                       Length 1969;
                                                                                                                                                                               Score 216; DB 1; Length 19
Pred. No. 4.4e-32;
0; Mismatches 630; Indels
                                                                                                         /note= "Sucrose-Transporter
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     Spinacia oleracea
                                                                                                                                                                                    10.3%;
51.5%;
                                                                                                                                                                            Query Match
Best Local Similarity 51.59
Matches 734; Conservative
                                                                           ; LOCATION: 70..1644
; OTHER INFORMATION:
US-08-356-340-1
                           FEATURE:
NAME/KEY:
  ORGANISM:
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ZIP: 10036-8403
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENT: PC-DOS/MS-DOS
SOFTWARE: PATENT: Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/356,340
FILING DATE: 21-DEC-1994
CLASSIFICATION NUMBER: US PCT/EP93/01604
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US PCT/EP93/01604
FILING DATE: 22-JUN-1993
RRIOR APPLICATION NUMBER: DE P42 20 759.2
FILING DATE: 24-JUN-1992
APPLICATION NUMBER: B4-JUN-1992
APPLICATION NUMBER: B4-JUN-1992
APPLICATION NUMBER: B5-JUN-1992
APPLICATION NUMBER: 24-JUN-1992
APPLICATION NUMBER: 24-JUN-1903
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1773 base pairs
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1773 base pair.
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STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: cDNA
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OTHER INFORMATION:
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Sequence 3, Application US/08356340
Patent No. 5608146
GENERAL INFORMATION:
APPLICANT: FROMMER, Wolf-Bernd
APPLICANT: RIESMEIER, Jorg
TITLE OF INVENTION: TRANSPORTER, PASMIDS, BACTERIA AND PLANTS CONTAINING A
TITLE OF INVENTION: TRANSPORTER, PLASMIDS, BACTERIA AND PLANTS CONTAINING A
TITLE OF INVENTION: TRANSPORTER AS WELL AS A PROCESS FOR THE PREPARATION AND
TITLE OF INVENTION: TRANSFORMATION OF YEAST STRAINS FOR THE IDENTIFI...
WUMBER OF SEQUENCES:
ADDRESSEE: Ostrolenk, Faber, Gerb & Soffen
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## Sequence 3, Application US/08786555B
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## TITLE OF INVENTION: OF YEAST STRAINS FOR THE IDENTIFICATION
## TITLE OF INVENTION: OF YEAST STRAINS FOR THE IDENTIFICATION
## TITLE OF INVENTION: OF YEAST STRAINS FOR THE IDENTIFICATION
## CURRENT APPLICATION NUMBER: US/08/786,555B
## CURRENT PILING DATE: 1994-12-21
## EARLIER APPLICATION NUMBER: PCT/EP93/01604
## EARLIER APPLICATION NUMBER: PCT/EP93/01604
## EARLIER APPLICATION NUMBER: DE P4220759.2
## EARLIER APPLICATION NUMBER: DE P4220759.2
## EARLIER PILING DATE: 1992-06-24
## SARLIER PILING DATE: 1992-06-24
## SCHEMBER: DE PASTOTS NOW NOW NOW SEQUENCE 3, APPLICATION NOW NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION NOW SEQUENCE 3, APPLICATION 
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                                                                                 Length 1773;
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                                                                            Score 187.8; DB 1;
Pred. No. 9.5e-27;
0; Mismatches 707;
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Matches 714; Conserv
US-08-356-340-3
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                                                                                                         1510 ACGGCGCAGCTGGCGGCCACCCGGGGCGGCGGGCCAGGGGCTGTGCACCGGCGTCCTCAAC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Bates, Mary K
APPLICANT: Jang, VII
APPLICANT: Graham, David Y
TITLE OF INVENTION: Methods and Reagents to Detect and
TITLE OF INVENTION: Characterize No. 6572862walk and Related Viruses
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                    1238 circicitingccaccingeraricatingcacaacrintagraricaringcinie
                                                                                                                                                                                                                  1570 ATCTCCATCGTCATCCCTCAGGTGATCATCGCGCTGGGCGCCGGCCCGGTGGGACGCGCTG
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MEDIUM TYPE: Floppy disk

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/486,049

FILING DATE: Une 7, 1995

ATTORNEY AGENT INFORMATION:

NAME: Davis, Peter

REGISTRATION NUMBER: 31,193

TELECOMMUNICATION INFORMATION:

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LOCATION: 146..5359
OTHER INFORMATION: /note= "The protein encoded"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Fulbright & Jaworski L.L.P. STREET: 801 Pennsylvania Ave., N.W. CITY: Washington; D.C.
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; Patent No. 6572862
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SEQUENCE CHARACTERISTICS:
LENGTH: 7724 base pair
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STRANDEDNESS: single
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ORGANISM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1276 ATCGAGCCCATGTGCCGGAAGGTCGGGC---CGAGGGTGGTGGGGTGACGAGCAACTTC 1332
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         470 AACATGTTACAGGGCCCATGCAGAGCACTACTGGCTGATCTCCGGCGGGAAATCCGGC 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       770 CAAGAAATCGACGAGAAATTAGCCGGCGGGAAAATCGAAAGTACCGTTTTTCGGTGAA 829
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                                                                                                                                                                                                                                                                                                                                                                                              365 GCGGCGACCTTGGTCACGCTCCGGTGACAC-------TCTCGGAAAAGGA
                    CTGGGGGCTTTCACATGCGCTCACTTCATGTGGCTCTGCGGCCCTATTGCCGGCTTA
                                                                   cressarirecrearaarirecretrirairisceridasesesarirere
                                                                                                                          GTGGTCCAACCGCTGGTTGGCCTGTACAGCGACAGGTGTACATCGAGATGGGGGAAGACGG
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CITY: LOS
STATE: CO
COUNTRY:
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                                                                                         /note= "Nucleotides 5346 through
5359 are used for coding two different amino acid
sequences: the first is the sequence coded by
nucleotides 146 through 5359, the second by nucleotides
5346 through 6935.
                                                                                                                                                                                                                                                                                                                                                                                                 2075
nuclectides 146 through 5359 is eventually cleaved to make at least a picornavirus 2c-like protein, a 3C-like protease and an RNA-dependent RNA polymerase.
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                                                                                                                                                                                                                                                              Query Match 3.5%; Score 72.2; DB 4; Length 7724; Best Local Similarity 71.4%; Pred. No. 0.00012; Matches 95; Conservative 0; Mismatches 38; Indels 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 2671;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 6
5168051-9
;PATENT NO. 5168051
;PATENT NO. 5168051
; TITLE OF INVENTION: NUCLEIC ACID ENCODING TGF-B ITS USES
; NUMBER OF SEQUENCES: 21
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/389,929
FILING DATE: 04-AUG-1989
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Best Local Similarity 81.4%; Pred. No. 0.00011;
Matches 83; Conservative 0; Mismatches 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Application US/09095443
Patent No. 6342593
GENERAL INFORMATION:
APPLICANT: Plowman, Gregory
APPLICANT: Peles, Eior
TITLE OF INVENTION: DIACNOSIS AND TREATMENT
TITLE OF INVENTION: OF ALP RELATED DISORDERS
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: Lyon & Lyon
633 West Fifth Street
Suite 4700
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6938..7573
                                                                                     5346..6935
                                                                NAME/KEY: CDS
LOCATION: 5346..693.
OTHER INFORMATION:
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FEATURE:
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STREET: 63
STREET: Su
                                                                                                                                                                                                 ; NAME/KEY;
; LOCATION:
US-08-486-049-1
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US-09-095-443-1
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RESULT 8

US-09-845-917A-28/C

Sequence 28, Application US/09845917A

Sequence 28, Application US/09845917A

Sequence 28, Application US/09845917A

Sequence 28, Application US/09845917A

Sequence 28, Application US/09845917A

TOTALE UNFORMATION:
TITLE OF INVENTION: PROCESSES FOR THE IDENTIFICATION OF COMPOUNDS WHICH

TITLE OF INVENTION: PRARMACEUTICAL COMPOSITIONS CONTINNING THEM AND THEIR

TITLE OF INVENTION: USE IN THE CONTROL OF CELL BEHAVIOUR

TITLE OF INVENTION: USE IN THE CONTROL OF CELL BEHAVIOUR

TITLE OF INVENTION: USE IN THE CONTROL OF CELL BEHAVIOUR

TITLE OF INVENTION: USE IN THE CONTROL OF CELL BEHAVIOUR

TITLE OF INVENTION: USE IN THE CONTROL OF CELL BEHAVIOUR

TITLE OF INVENTION NUMBER: US/09/845,917A

CURRENT APPLICATION NUMBER: US/09/845,917A

NUMBER OF SEQ ID NOS: 58

SOFTWARE: PARENTIN VET. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1976 CGATGATGTTCACATCATTTGTCTTTAATACATACCGGTTTCTATTGTCTTTAAAAAAA 2035
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LOCATION: (8455)
OTHER INFORMATION: "N is A, C, G, or T"
FEATURE: OTHER INFORMATION: Description of Artificial Sequence: artificial
OTHER INFORMATION: plasmid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .
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Best Local Similarity 77.0%; Pred. No. 0.00014;
Matches 87; Conservative 0; Mismatches 26;
                                                                                                                MEDIUM TYPE: storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: IBM P.C. DOS 5.0
SOFTWARE: FastSEQ for Windows 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/095,443
FILING DATE: Herewith
CLASSIFICATION TOWNER: 60/049,477
FILING DATE: Une 12, 1997
ATTORNEY/AGENT INFORMATION:
NAME: WAIDLEY, NORMARTION:
NAME: WAIDLEY, RICHARD
REGISTRATION NUMBER: 32,327
REGISTRATION NUMBER: 32,327
REGISTRATION NUMBER: 32,327
REGISTRATION NUMBER: 32,327
RETERENCE/DOCKET NUMBER: 235/055
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECHAX: (213) 955-0440
TELEFAX: (213) 955-0440
TELEFAX: 67-3510
INFORMATION FOR SEQ ID NO: 1:
                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
MEDIUM TYPE: storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 4456 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY: linear
                             90071-2066
U.S.A.
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1231 GGGCTGCTACTCAACTCGGTTATTCTAGGGTTCAGCTCGTTCCTGATCGAGCCCATGTGC 1290
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                                                                                                                                                                                                                                                                             APPLICANT: Zhang, Zemin
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
TITLE OF INVENTION: SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC
FILE REPERENCE: P3330RIC59
CURRENT APPLICATION NUMBER: US/10/140,002
CURRENT APPLICATION NUMBER: US/10/140,002
CURRENT APPLICATION TEMOVED - See Palm or File Wrapper
NUMBER OF SEQ ID NOS: 550
SEQ ID NO 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.4%; Score 70.8; DB 3; Length 1069;
llarity 44.2%; Pred. No. 0.00012;
Conservative 0; Mismatches 477; Indels 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 2845;
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Patent No. 6313375
GENERAL INFORMATION
PAPPLICANT: Redolf Jung
APPLICANT: Reaccis Barrieu
ITLE OF INVENTION: Maize Aquaporins and Uses Thereof
FILE REFERENCE: 0919
CURRENT APPLICATION NUMBER: US/09/372,422A
CURRENT APPLICATION NUMBER: US/09/372,422A
CURRENT APPLICATION NUMBER: US 60/098,692
PRIOR FILING DATE: 1998-08-31
NUMBER OF SEQ ID NOS: 49
SOFTWARE: FastSEQ for Windows Version 3.0
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llarity 82.0%; Pred. No. 0.00014;
Conservative 0; Mismatches 18;
                                                                                                                                                                      Smith, Victoria
Stewart, Timothy A.
                                                                     Gerritsen, Mary E.
                                                                                                                                                                                                                   Tumas, Daniel
Watanabe, Colin K
Wood, William
                                                                                                           Godowski, Paul J.
Gurney, Austin L.
                                                                                                                                                      Sherwood, Steven
                                                                                            Goddard, Audrey
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo Sapien
US-10-140-002-207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 381; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Zea mays
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US-09-372-422A-7
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APPLICANT:
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                                                                                                                                                                   8149 GTATTTTCCAATAAATTATATATCTTCAGTTTAATCTAATTCAACATCTACTTCTGTATT 8090
                                                                                                                                                                                                              APPLICANT: Vandekerckhove, Joel
TITLE OF INVENTION: PROCESSES FOR THE IDENTIFICATION OF COMPOUNDS WHICH
TITLE OF INVENTION: CONTROL CELL BEHAVIOUR, THE CONPOUNDS IDENTIFIED AND
TITLE OF INVENTION: PHARMACEUTICAL COMPOSITIONS CONTIANING THEM AND THEIR
TITLE OF INVENTION: USE IN THE CONTROL OF CELL BEHAVIOUR
TITLE OF INVENTION: USE IN THE CONTROL OF CELL BEHAVIOUR
CURRENT APPLICATION NUMBER: US/09/845,917A
CURRENT FILING DATE: 2011-04-30
NUMBER OF SEQ ID NOS: 58
SOFTMARE: Patentin Ver. 2.1
                                                                                                                             1960 GIAGAGIACAACIAGACGAIGIICACAICAITIGICITIAAIACAIACGGIIIICIA
                                                                                         Gaps
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                                            Length 10288;
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                                          Score 71.4; DB 4; Length 1
Pred. No. 0.00018;
0; Mismatches 36; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature
LOCATION: (11582)
OTHER INFORMATION: "N is A, G, C or T"
                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 27, Application US/09845917A
Patent No. 6653529
GENERAL INFORMATION:
APPLICANT: Bogaert, Thierry
APPLICANT: Vandekerckhove, Joel
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                                        3.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                      Query Match
Best Local Similarity 72.15
Matches 93; Conservative
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US-09-845-917A-27/c
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LENGTH: 13414
TYPE: DNA
US-09-845-917A-28
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GENERAL INFORMATION:
APPLICANT: Donoho, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Eriedrich, Ginn
APPLICANT: Zambrowicz, Brian
APPLICANT: Sambs, Arthur T.
ITILE OF INVENTION: No. 6716614el Human Calcium Dependent Proceases,
ITILE OF INVENTION: No. 6716614el Human Calcium Dependent Proceases,
ITILE OF INVENTION: No. 6716614el Human Calcium Dependent Proceases,
ITILE OF INVENTION: Polybucleotides Encoding the Same, and Uses Thereof
FILE REFERENCE: LEX-039-03A
CURRENT APPLICATION NUMBER: US 60/152,057
PRIOR FILING DATE: 1999-09-02
PRIOR FILING DATE: 1999-09-02
PRIOR FILING DATE: 2000-09-01
NUMBER OF SEQ. DE NOS: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/09554337
Patent No. 6475780
GENERAL INFORMATION, Mark
APPLICANT: Parxington, Mark
APPLICANT: Li, Xiaomao
APPLICANT: Klein, Michel H.
TILLE OF INVENTION: ALPHAVIRUS VECTORS FOR PARAMYXOVIRUS VACCINES
FILE REFERENCE: 1038-1042 MIS
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Pred. No. 0.00016;
0; Mismatches 12;
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3.4%; Score 70.8; DB 4;
Best Local Similarity 86.7%; Pred. No. 0.00016;
Matches 78; Conservative 0; Mismatches 12;
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NUMBER OF SEQ ID NOS: 9
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9
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Patent No. 6716614
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ORGANISM: homo sapiens
                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: homo sapiens
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Best Local Similarity
Matches 78; Conserv
                                                                                                                                                                                             LENGTH: 2806
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US-09-554-337-4
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APPLICANT: Donoto, Gregory
APPLICANT: Donoto, Gregory
APPLICANT: Turner, C. Alexander Jr.
APPLICANT: Nehls, Michael
APPLICANT: Friedrich, Glenn
APPLICANT: Sambrowicz, Brian
APPLICANT: Sands, Arthur T.
APPLICANT: Jensey, Arthur T.
APPLICANT: Jensey, Arthur T.
APPLICANT: Jensey, Arthur T.
APPLICANT: Jensey, Arthur T.
APPLICANT: Jensey, Arthur T.
APPLICANT: Jensey, Arthur T.
APPLICANT: Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, Jensey, J
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PRIOR APPLICATION NUMBER: US 60/152,057
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Patent No. 6433153
GENERAL INFORMATION:
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US-09-653-839-9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/07920281C
| Patent No. 5739026
| GENERAL INFORMATION:
| APPLICANT: Garoff Henrik
| APPLICANT: Liljestrom, Peter
| TITLE OF INVENTION: DAB Expression Systems Based on TITLE OF INVENTION: Appariruses
| NUMBER OF SEQUENCES: 27 | CORRESPONDENCE ADDRESS:
| APDRESSEE: Birch Stewart, Kolasch & Birch STREET: P.O. Box 747 |
| CITY: Falls Church STREET: O'S COUNTRY: USA |
| COUNTRY: USA |
| COMPUTER REDABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPABALE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPABALE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPABALE FORM: MEDIUM TYPE: Ploppy disk COMPUTER: IBM PC COMPABALE FORM: MEDIUM TYPE: Ploppy disk COMPUTER: IBM PC COMPABALE FORM: MEDIUM TYPE: Ploppy disk COMPUTER: IBM PC COMPABALE FORM: MEDIUM TYPE: Ploppy disk COMPUTER: IBM PC COMPABALE FORM: MEDIUM TYPE: Ploppy disk COMPUTER: IBM PC COMPABALE FORM: MEDIUM TYPE: Ploppy disk COMPUTER: IBM PC COMPABALE FORM: MANGER IBM PC COMPABALE FORM: MANGER IBM PC COMPABALE FORM: MANGER MUMPBR: 28,977 |
| REFERENCE/DOCKET NUMBER: 28,977 |
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| REFERENCE/DOCKET NUMBER: 28,977 |
| REMANDENIES GAID NO: 1: SEQUENCE CHARACTERISTICS: 1.037 |
| TELEONMUMICATION NUMBER: 28,077 |
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| TELEONMUMICATION NUMBER: 28,077 |
| TELEONMU
CURRENT APPLICATION NUMBER: US/09/554,337
CURRENT FILING DATE: 2000-10-20
FRIOR APPLICATION NUMBER: 60/065,791
PRIOR FILING DATE: 1997-11-14
PRIOR PILING DATE: 1997-11-13
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin Ver: 2.1
SOFTWARE: Patentin Ver: 2.1
LENGTH: 8100
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                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
; ORGANISM: respiratory syncytial virus
US-09-554-337-4
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MOLECULE TYPE: RNA (genomic)
HYPOTHETICAL: NO
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HTHT-SENES: NO
ORIGINAL SOURCE:
CORGANISM: Semiliki Forest Virus
ORGANISM: Semiliki Forest Virus
ORGANISM: Semiliki Forest Virus
CORGANISM: Semiliki Forest Virus
CORGANISM: LOCATION: 1.11517
OTHER INFORMATION: Application of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence of the sequence
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Sequence 12595, A Sequence 22383, A Sequence 226, Appl Sequence 1709, Appl Sequence 1709, Appl Sequence 1709, Appl Sequence 1709, Appl Sequence 1709, Appl Sequence 18392, A Sequence 19222, A Sequence 1316, Appl Sequence 1316, Appl Sequence 1316, Appl Sequence 23, Appl Sequence 1624, Appl Sequence 1624, Appl Sequence 1624, Appl Sequence 1624, Appl Sequence 1624, Appl Sequence 1525, Appl Sequence 1525, Appl Sequence 1526, Appl Sequence 1526, Appl Sequence 1526, Appl Sequence 1525, Appl Sequence 25022, Appl Seq

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262 GCGGTGGTGGACCACGTGGCCCCGATCAGCCTCGGAAGCTCATCCTCGCCGGCATGGTC 321
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Sequence 18, Application US/10409701

Sequence 18, Application US/10409701

Publication No. US2030221224A1

GENERAL INFORMATION:

APPLICANT: Sinselmeier, Chris

APPLICANT: Helentiaris, Timothy G.

TITLE OF INVENTION: Enhanced Silk Exsertion Under Stress

FILE REPERENCE: 142.

CURRENT APPLICATION NUMBER: US/10/409,701

PRIOR PLICATION NUMBER: US 60/370,796

PRIOR FILING DATE: 2002-04-08

NUMBER OF SEQ ID NOS: 26

SOFTWARE: PSESSEQ for Windows Version 4.0

SEQ ID NO 18

LENGTH: 1557

TYPE: DNA

ORGANISM: Zea mays

FRAUCHE:

NAME/CONT.
8 US-10-425-115-120168

7 US-10-437-963-12595

6 US-10-437-963-39173

7 US-10-431-273-25

10S-10-938-842A-1709

10S-09-938-842A-1709

10S-09-938-842A-1709

10S-09-938-842A-1709

10S-09-938-842A-114-15792

8 US-10-247-813-29

10S-09-938-842A-115-10747

10S-09-938-842A-1116

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74.6%; Score 1557; Dest Local Similarity 100.0%; Pred. No. 0;
Matches 1557; Conservative 0; Mismatches
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Sequence 31902, A
Sequence 142617,
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                                                                                                                                                       November 7, 2004, 09:12:46; Search time 1038 Seconds (without alignments) 10830.476 Million cell updates/sec
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US-10-425-114-35042
US-10-431-273-22
US-10-431-273-22
US-10-431-273-23
US-10-310-154-359
US-10-739-930-4637
US-10-739-930-4637
US-10-425-114-12513
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               GenCore version
Copyright (c) 1993 - 2004
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Maximum Match 1008
Listing first 45 summaries
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CANT: Screen, Steven B.

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CANT:
1402 GTGCAGGACGCCATCACCGCGAACGCCACCATCAAGGCCGTCTGCCTCGTCCTCTTCGCC 1461
1201 GTGCAGGACGCCATCACGCGAACGCCAGCATCTAAGGCCGTCTGCCTCGTCCTCTTCGCC 1260
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Cation No. US2004003488A1
AL INFORMATION:
CANT: Liu, Jingdong
ICANT: Zhou, Yinua
ICANT: Koralic, David K.
ICANT: Screen, Serven E
ICANT: Tabaska, Jack E
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Sequence 14334, Application US/10767701
Sequence 14334, Application US/10767701
Publication No. US20040172684A1
GENERAL INFORMATION:
APPLICANT: Shou, Yihua
APPLICANT: Shou, Yihua
APPLICANT: Covalic, David K.
APPLICANT: Covalic, David K.
APPLICANT: Shou, Yihua
ITILE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof For Plant Improvement
TITLE OF INVENTION: 18-21 (535.55) B
CURRENT APPLICATION NUMBER: US/10/767,701
CURRENT FILING DATE: 2004-01-29
NUMBER OF SEQ ID NOS: 63128
SEQ ID NO 14354
IENGTH: 2470
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GENERAL INFORMATION:
APPLICANT: Liu, Jingdong
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APPLICANT: Tabaska, Jack E
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APPLICANT: Tabaska, Jack E
APPLICANT: Gao, Yongwei
TITLE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associat
FILE REFERENCE: 38-21(53313)B
CURRENT APPLICATION WUMBER: 108/10/425,114
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 73128
SEQ ID NO 35042
LENGTH: 1372
                                                                                                                                                TYPE: DNA
ORGANISM: Zea mays subsp. mexicana
FEATURE:
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Best Local Similarity 97.7%;
Matches 1347; Conservative 594 757 654 셤 8

RESULT 5 US-10-425-114-35042 Sequence 35042, Application US/10425114 ; Publication No. US200400348881

CTGTGCG 876 Qy 115 CCGTCCATCGATCGTA CTGTGCG 773 Db 169 CCCTCTAGATCCTA	SGTAACC 936 Qy 175 GACAGGTCCCGTACGT SGTAACC 833 Dh 229 ACACGTCCCGTAT	996 CY 235 893 SH 200	1056 DD 288 953 QY 295	1116 DD 348 1013 QY 355	CCCCAAG 1176 DD 408 CICICCIGCTCACCC QY 415 ATGTGGCTCTGCGGCC CCCCAAG 1073 DD 468 ATGTGGCTCTGCGCGCC DD 468 ATGTGGCTCTGCGCGCC	1236 Qy 475 1133 An 528	1296 Oy 535 1193 Oy 535	1356 DD 388 1253 QY 595	1416 DD 646 1313 QY 655 1313 Ph 708	1475 CV 715 1372 Db 768	775	835	-E 888	Qy 895 CTGGTGGCCGTGGTCT	9 19	1008	1008	1008	1008 1015 1065 1065	1008 1015 1065 1075 1125
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Qy 817 AACA Db 714 AACA	Qy 877 AACC Db 774 AACC	Oy 937 CTGA 	Oy 997 GGCG	Oy 1057 CTGC Db 954 CTGC	Oy 1117 CCGT Db 1014 CCGT	Qy 1177 GGGA Db 1074 GGGA	Qy 1237 CTAC Db 1134 CTAC	Qy 1297 GTCG Db 1194 GTCG	Qy 1357 ACCG Db 1254 ACCG	Qy 1417 ACCG Db 1314 ACCG	RESULT 6 US-10-431-273-24	<pre>; Sequence 24, App; ; Publication No. : GENERAL INFORMAT</pre>	; APPLICANT: Demm; APPLICANT: She	; APPLICANT: Gle ; APPLICANT: No. ; APPLICANT: Sau	; APPLICANT: HAI; APPLICANT: FOY; TITLE OF INVENT	 ; TITLE OF INVENT; FILE REFERENCE:	; TITLE OF INVENT; FILE REFERENCE; CURRENT APPLICA; CURRENT FILING	TITLE OF INVENT FILE REFERENCE: CURRENT FILING NUMBER OF SEQ I SOFTWARE: FASES	TITLE OF INVENT FILE REPERENCE: CURRENT APPLICE CURRENT FILING NUMBER OF SEQ I SOFTWARE: FASES SEQ ID NO 24 TYPE: DNA	TITLE OF INVENT FILE REFERENCE: CURRENT APPLICA CURRENT FILING NUMBER OF SEQ IS SOFTWARE: FastS SOFTWARE: FastS SOFTWARE: TastS TYPE: DNA TYPE: DNA CRGANISM: PEET

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Pred. No. 7.2e-217;
0; Mismatches 344; Indels 3;
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; Publication 0. US20030237108A1
; GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Demmer, Michael Andrew
APPLICANT: Glenn, Matthew
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APPLICANT: Glenn, Matthew
APPLICANT: Glenn, Matthew
APPLICANT: Glenn, Matthew
APPLICANT: No. US20030237108A1riss, Michael Geoffrey
APPLICANT: Saulsbury, Keith Martin
APPLICANT: Forster, Richard L. S.
APPLICANT: Forster, Richard L. S.
TITLE OF INVENTION: Grasses and methods for their use.
FILE REFERENCE: 11000.1069U
CURRENT APPLICATION NUMBER: US/10/431,273
CURRENT FILING DATE: 2003-05-06
NUMBER OF SEQ ID NOS: 92
SEQ ID NO 22
LENGTH: 2092
TYPE: DNA
TYPE: DNA
TYPE: DNA
TYPE: DNA
CORGANISM: Festuca arundinacea
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Best Local Similarity 78.4%;
Matches 1260; Conservative
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GTGCTCGCCATGGCTCGTGGCGACGGCGGGCAGCTGGCGGAGCTGTCCGCGGGGGTCCGC
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                                              Length 1831;
                                                                              Indels
                                              Score 826.2; DB 15;
Pred. No. 4.2e-170;
0; Mismatches 398;
                                              Query Match
Best Local Similarity 72.5%;
Matches 1090; Conservative
   ; OTHER INFORMATION:
US-10-310-154-359
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                    TITLE OF INVENTION: Gene Sequences and Uses Thereof in Plants FILE REFERENCE: 38-15(52796)B
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CURRENT FILING DATE: 2002-12-04
PRIOR APPLICATION NUMBER: 60/337,358
PRIOR FILING DATE: 2001-12-04
SEQ ID NOS: 736
LENGTH: 1831
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Malloy, Kathleen A.
Malloy, Kathleen A.
Miller, Christine L.
Miller, Phillip W.
Padmavathi, Manchikanti
Parnell, Laurence D.
Start, William G.
Tennesen, Dan
Vidya, K.R.
Wang, Haiyun
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Publication No. US20030233670A1
GENERAL INFORMATION:
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Boddupalli, Raghava
Deikman, Jill
Deng, Molian
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Laccetti, Lucille B.
Lai, Chao-Qiang
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Johnson, G. Richard
Jung, Vincent
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Galligan, Meghan M.
Hinchey, Brenda S.
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APPLICANT: Chomec, Paul S.
APPLICANT: Adas, Thomas H
APPLICANT: Ruff, Thomas G.
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Ahrens, Jeffrey E.
Ball, James A.
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Liu, Jingdong
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Zhao, Yajuan
Zhou, Li
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CRGANISM: Zea mays
FBATURE:
NAME/KEY: CDS
LOCATION: (76)..(1599)
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Qy 1452 CCTCT	CCTCTTCGCCTTCCTGGGGGTCCCTCTCCTGTACAGCGTCCCGTTCGCGGTGAC 1511	٥٧	700 CCAGCACGTGCTATGATGCTGATCTATGTGACCATCATGGGCCAAGTGCGGCTAACTCC 759
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Oy 1512 GGCGC		٥٨	ATCITCIGITCITGGATGGCGCTGGGAAACAICCTAGGCTACTCCTCTGGCTCCACGAAC 81
Db 1350 GGCAC	CAGGTGGCGGCGAAGGGGGGGGGGGGGGGGGGGGGGGGG	DÞ	930 GCCTGCGCAAATCTGAAAGGCGCATTTCTGGTGGCTGTGCTGTTCCTGGCTGTTTTG 989
Oy, 1572 CTCCA Db 1410 CTCCA	CTCCATCGTCATCCCTCAGGTGATCATCGCGCTGGGCCCGGTGGGACGCCCTGTT 1631	oy B	820 AATTGGCACAAGTGGTTTCCCTTCCTTAAAACGAGCGCCTGCTGTGAGGCCTGTGCGAAC 879
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Qy 1752 CGG 1	1754	δ	1000 GGCGAGGTCGAGACTGAGCCTACCGGGCCACTTGCCGTGCTCAAGGGCTTCAAGGACCTG 1059
Db 1590 AGG 1	1592	qa	1167 GGCCAGGTTGAAGTCGAGCCCACCGGCGCCGCTCGCCGTGTTCAAAGGCTTCAAGGATTGAAGATTGTG 1226
RESULT 10 US-10-739-930-4637		oy Oy	1060 CCTCCCGGGATGCCGTCCTCGTGACTGCCATCACCTGGCTTTCGTGGTTCCCG 1119 .
<pre>; Sequence 4637, Appli ; Publication No. US20 ; GENERAL INFORMATION:</pre>	equence 4637, Application US/10739930 ublication No. US/20040216190A1 ENERAL INFORMATION:	8	TTCATCCTCTAGGACACCGACTGGATGGGCCGGGGAGATCTACCACGGCGACCCCAAGGGG
; APPLICANT: Kovalic, David K. ; TITLE OF INVENTION: NUCLEIC A	CID MOLECULES AN	අු :	
; FILE OF INVENTION: PEANTS; FILE REFERENCE: 38-21 (53377); CHRRENT APPLICATION MIMBER:	ND USES THEREOF FO	e d	0 4
CURRENT FILING DATE:	12-18	i ko	CTCAACTCGGTTATTCTAGGGTTCAACTCCTGATCGAGCCCCATGTGCGGAAGGTC 129
; SEQ ID NO 4637 ; LENGTH: 2235 		qa	1407 CTCAACTCGGTCGTCCTGGGGTTCAGCTCGTTCCTGATCGAGCCGCTGTGCAAGAGGCTA 1466
	aestivum	δ,	0 GGGCCCAGGGTGTGTGGTGACGACTTCATGGTCTGCGTCGCCCATGGCGGCCACC 1
; OTHER INFORMATION: US-10-739-930-4637	ION: Clone ID: TRIAE-23APR03-CLUSTER288_1	op.	152
Query Match Best Local Simi	32.5%; Score 678.8; DB 18; Length 2235; arity 71.8%; Pred, No. 6.6e-138;	oy Oy	1360 GCGCTGATCAGCTTCTGGTCGCTCAGGACTACCAGGGTACGTGCAGGACGCCATCACC 1419 1227 TGCATCATAAGCTGGTGGGCTACTCAGGACTTCCAGGACGCCATCACC 1586
349	; Conservative o; mismacches 304; indate 10; daps 10; crocaccriccororacches 304; indate 405	රු ස්	1420 GCGAACGCCAGCATCAAGG-CCGTCTGCCTCCTTTCGCCTTCTTGGCGTCCTCT 1478 1-60 COAACGAACGAACAAAAAAAAAAAAAAAAAAAAAAAAAA
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Cy 406 ACTIC	CTICATICATGGGGC-CTCTGCGGCCCTATTGCCGGCTTAGTGGTCCAACGCTGGTTGG 464	; A	7 CGCCATTCTGTACAGTGTCCCTTTCGCGGTGACGGCGTCAGCTGGCGGGAAGAAGAGGGGG
465	rgaca rgaca	ර ස	1538 GCGGGCAGGGCCTGTGCACCGGCGTCCTCATCGTCATCCTCCTCAGGTGATCA 1597
		Q C	

The Age of the Control of the Cont	1729 CAGTTCCGGCCGCTCAGCGGCCGCCTGATC 1763 [1]	TYPE: DB 16 Length 1910; Lengt	Qy 639 TGCGATCGTGTACGTTCTGGGGTTTTGGCTCCTTGACTTCTCCAACAACACTGTGCAGGG 698
Qy 1598 TCGCGCTGGGCCCGCCCGCGCCGCCGCTTTCGGGAAGGCCAACATCCCGGCGTTCG 1657 Db 1767 TCGCGGTGGGCCCGTGGAACGGCTGTTCGGCAAGGGCAACGCGGGTTCG 1826 Qy 1658 GCGTCGCGTCGGCCTTCGCCTTCGCCGTCGGCGGCTGTTCCTGCTG	12513 No. US2040034888A1 No. US2040034888A1 Liu, Jingdong Zhou, Yihua Zhou, Yihua Zhou, Yihua Zhou, Yohavi Kovalic, David K. Screen, Steven E Tabaska, Jack E Cao, Yongwei NENTION: Plants and Us NENTION: Plants and Us NENTION: Plants and Us NENTION: Plants and Us NENTION: Plants and Us NED ID NOS: 73128 513 Zea mays REATION: Clone ID: 701:	Query Match 30.4%; Score 634.2; DB 16; Length 695; Best Local Similarity 94.5%; Pred. No. 2.2e-128; 60; Gaps 0; Matches 657; Conservative 0; Mismatches 38; 10dels 0; 0; Gaps 0; QY 1069 ATGCGGTCGTGCTCCTGGTACTGCTGCTCTGGGTTCCGTTCATCTC 60 0 QY 1129 TACGACACCGACTGGATGGACTCACCTGGCTTCGTGGTTCCGTTCATCTC 60 QY 1129 TACGACACCGACTGGATGGACTCACCTGGCTTCGGGTTCCGGTTCATCTC 60 QY 1189 TACGACACCGACTGGATGGGCCGTGAATTACCAGGCGACCCCAAGGGTACCAACTC 120 QY 1189 TACGATCTGGGCTTCAACGAAGGCTGTACCAGGCGCTTCGGGTTCCAACTCG 120 QY 1249 GTATTCTGGGCTTCAACTGACTCGAACTGGCCCAAGGGTCGCTACTGGGCCCAACTGGGCCCAAGGTCGGCCCAAGGTCGGCCCAAGGTCCCAAGGTCGCCCAAGGTCGCCCAAGGTCGCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCCCAAGGTCCCC	

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APPLICANT: La Rosa, Thomas J.
APPLICANT: A Rosa, Thomas J.
APPLICANT: APPLICANT: Cao, Vandad
APPLICANT: Zhou, Yihua
APPLICANT: Cao, Yongwei
TITE OF INVENTION: Nucleic Acid Molecules and Other Molecules Associated With
TITE OF INVENTION: Plants
FILE REFERENCE: 38-21(5322)B
CURRENT APPLICATION NUMBER: US/10/425,115
CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 369326
SEQ ID NO 120168
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Pred. No. 8.7e-118;
); Mismatches 514; Indels 27;
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                                                                                                                                                                                                                                                                                                                     Sequence 120168, Application US/10425115 Publication No. US20040214272A1 GENERAL INFORMATION:
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Best Local Similarity 63.8%;
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ORGANISM: Zea mays
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US-10-425-115-120168
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Pred. No. 2.5e-108;
O; Mismatches 495;
                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Clone ID: PAT_MRT4530_18708C.1
US-10-437-963-12595
FILE REFERENCE: 38-21 (53221) B
CURRENT APPLICATION NUMBER: US/10/437,963
CURRENT FILING DATE: 2003-05-14
NUMBER OF SEQ ID NOS: 204966
SEQ ID NO 12595
LENGTH: 1662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26.0%;
62.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 62.6
Matches 958; Conservative
                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Oryza sativa
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGATGCCG-
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Publication No. US20040123343A1
GENERAL INFORMATION:
APPLICANT: La Rosa, Thomas J.
APPLICANT: Zhou, Yihua
APPLICANT: Wu, Wei
APPLICANT: Wu, Wei
APPLICANT: Wu, Wei
APPLICANT: Boukharov, Andrey A.
APPLICANT: Li, Ping
APPLICANT: Li, Ping
TITLE OF INVENTION: Rice Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
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APPLICANT: Zhou, Yihua
APPLICANT: Screen, Steven E
APPLICANT: Screen, Steven E
APPLICANT: Screen, Jack E
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APPLICANT: Nucleic Acid Molecules and Other Molecules Associated With
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
CURRENT APPLICATION NUMBER: US/10/425,114
CURRENT FILING DATE: 2003-04-28
SEQ ID NO 22383
LENGTH: 1155
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; OTHER INFORMATION: Clone ID: LIB3479-003-FS_FLI
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ORGANISM: Oryza sativa nipponbare
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    Length 1155
Score 531.8; DB 16;
Pred. No. 6e-106;
                                              Mismatches 152;
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  Query Match
Best Local Similarity 80.4%;
Matches 623; Conservative
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433.2 20.7 704 6 CD884481 CD884481 432.4 20.7 594 2 BF478755 BF478755 429 20.5 53.7 CF630902 CF630902 429 20.5 647 1 A7925143 AV925143	29 · 425.8 20.4 533 7 CK369825 CK369825 30 422.6 20.2 592 5 BQ743802 BQ743802	C 31 422.4 20.2 526 6 CD970384 CD970384 QAD116e09. C 32 422.4 20.2 526 6 CD970430 CD970430 QAD17b09. 33 420.6 20.1 617 4 BJ477966 BJ477966 BJ477966 BJ477966 C G G G G G G G G G G G G G G G G G G	414.2 19.8 700 1 AL508285 AL508285 41.8 19.7 828 4 B1953334 B1953314 411.4 19.7 795 7 CO522314 CO522314	411.2 19.7 828 9 CC692415 CC692415 409.4 19.6 768 7 CC527407 CC527407 409.4 19.6 731 7 CK124551 CK124507	403.8 19.3 587 6 CA222528 CA222528 402.4 19.3 516 7 CK371610 CK371610	395 18.8 582 6 CD057532 CD057532 CD057532	ALIGNMENTS	T 1 212	Z.	ORGANISM Zea mays Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnollophyta, Lillopsida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Zea.	AUTHORS Hainey, C.F., Dolan, Miao, G.H., Vogel, J.M., Whitsitt, M.S.,	Alinia, h. Maize Mapping Project/DuPont Consensus Sequences for Design of Overgo Probes	NOTENAL Unpublished (2002) REFERENCE 2 (bases 1 to 2088)	AUTHURS COO.E.H. TITLE Direct Submission JOURNAL Submitted (25-APR-2002) Maize Mapping Project, University of	COMMENT If you are interested in getting corresponding physical clones,	searching at MSL, maizemen.org; ZmDB, www.zmdb.iastate.edu; TICR, www.tigr.org; or NCBI, www.ncbi.nlm.nih.gov. When the source of the	maize CDNA sequences is either Virginia Walbot, Stanford or Pat Schnable, Iowa State, then clones may be requested from ZmDB: www.zmdh iastate edu	FEATURES Location/Qualifiers source 1. 2088		/db_xref="MalazeDB:63594" /db_xref="taxon:4577" /clone_lib="Malaze Mapping Project/DuPont Cornsensus	c of a project of	assemblies resulting from the application of public contigs to seed DuPont contigs; this resource was assembled by DuPont as part to fa collaboration for the contiguent of the continuity of th	Overgo addressing of pack in conjunction with the marke Mapping Project" ORIGIN	Query Match 100.0%; Score 2088; DB 3; Length 2088;
GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.	OM nucleic - nucleic search, using sw model	Run on: November 7, 2004, 05:29:17; Search time 6565 Seconds (without alignments) 11589.666 Million cell updates/sec	Title: US-09-679-687B-1 Perfect score: 2088 Sequence: 1 gcacgagacactcctcacctaaaaaaaaaaaaaa	Scoring table: IDENTITY NUC Gapox 1.0	Searched: 32822875 seqs, 18219865908 residues	Total number of hits satisfying chosen parameters: 65645750	Minimum DB seq length: 0 Maximum DB seq length: 200000000	Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries	Database : EST:* 1: gb_est1:* 2: gb_est2:* 3: gb_htc:* 4: gb_est3:*		: gb_gsst:* s the number of results predicted by chance to have	greater than or equal to the score of the result be is derived by analysis of the total score distribution	SUMMARIES	Result Query No. Score Match Length DB ID Description	2088 100.0 2088 3 AY106212 AY106212 850 5 40 7 902 5 CPA40318	790.4 37.9 895 6 CD441187 630.6 30.2 1071 7 CK16297	539-6 25.8 84-6 CR647418 CA155914 CA155914	523.6 25.1 705 5 BU925783 BU925783 518.6 24.8 811 6 CB659941 CB659941	10 516.4 24.7 843 6 CB661694 GB661694 11 508 24.3 638 6 CD236385 CD236385	493.8 23.6 769 6 CB678068 CB678068 690.8 23.5 745 6 CB618707 CB618707 CB618707	488.8 23.2 496 5 B0925/92 B0925792 484.8 23.2 496 5 B0938253 B0538253 605.8 60	1/ 480.2 23.0 581 2 BE36154/ BE361547 DG1 81 H0 18 476.8 22.8 657 6 CF325968 CF325968 UNTI04- 19 463 22.2 998 7 CK162767 CK162767 FGAS01536 20 457.2 21.9 694 6 CF0R813 CF0R81813 F1.104523	445 21.3 538 6 CA220149 CA220149 443.8 21.3 657 7 CM150206 CN150206	437.6 21.0 656 6 CD879901 433.8 20.8 539 6 CA163799

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Unpublished (2002)
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Unpublished (2002)
Dr. Joachim Messing's lab
Waksman Institute, Rutgers University
190 Frelinghuysen Rd., Piscataway, NJ 08854, USA
Tel: 732-445-535
Email: jlaakwaksman.rutgers.edu
Seq primer: T7.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Zea mays"
/mol_type="mRNA"
/culfivar="W22"
/db_xref="t-axon:4577"
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/clone lib="Endosperm 5"
/note="Vector: pBluesGript SK-; Site_1: EcoRI; Site_2:
/note="Vector: pBluesGript SK-; Site_1: EcoRI; Site_2:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               957 GCCGTACAGAGCGAAACGAGAACCTCCCGACGACGAAGGCCGGCGGCGAGGTCGAGACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCTACCGGGCCACTTGCCGTGCTCAAGGGCTTCAAGGACCTGCCTCCCGGGGATGCCGTC
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                                                                                                                                                                                                                   Bukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheo
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, P.
clade, Panicoideae, Andropogoneae, Zea.
1 (bases 1 to 902)
Lai,J., Dey,N., Kim,C.S., Becraft,P., Larkins,B., Linton,E.
Messing,J.
   CD440318 Bndosperm_5 Zea mays CDNA, mRNA sequence. CD440318.1 GI:31355961
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Pred. No. 2.2e-159;
0; Mismatches 24;
                                                                                                                                                                                                                                                                                                                                                                                            Sequencing of the maize endosperm ESTs Unpublished (2002)
Contact: Lai, Jinsheng
Contact: Lai, Jinsheng
Waksman Institute, Rutgers University
190 Frelinghuysen Rd., Piscataway, NJ 088
Fax: 732-445-3801
Fax: 73-445-535
Email: jlai@waksman.rutgers.edu
Seq primer: T3.
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1. .902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match 40.7%;
Local Similarity 97.0%;
les 878; Conservative
                                                                                                                                                               Zea mays
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Best Local S:
Matches 878
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LOCUS
DEFINITION
ACCESSION
                                                                                       VERSION
KEYWORDS
SOURCE
ORGANISM
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AUTHORS
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NCE 1 (bases 1 to 1071) ORS Allard, F., Crosby, W.L., Danyluk, J., Budes, F., Frick, M., Gaudet, D., Genswein, B., Graf, R., Gulick, P., Hrycan, L.D., Laroche, A., Links, M.G., McCarthy, E.L., Monroy, A., Muzak, I., Nilson, D., Penniket, C., Roach, J.L., and Sarhan, F. Frunctional Genomics of Abiotic Stress In Wheat and Canola Crops		Saskatchewan, S7N 5A9, Canada Tel: 306 966 1769 Fax: 306 966 2033 Fmail: foas ests@cs.usask.ca	This sequence is the direct result of the Base calling software phred (default parameters). It is the raw base calls. To aid in the identification of the high quality insert the software Lucy (Affault parameters) has been run on this sequence. Lucy identified	the region [57,905]. Plate: L4B006 row: H column: 07. Location/Qualifiers		/ordes=Torgan: Crown and leaf; Vector: pCMV.SPORT6; Conditions for growth: Seeds were germinated in a water-saturated mix (50% black earth and 50% Promix) in a crowth chamber for 7 days under an irradiance of 200 mmol	m-2 sec-1. The temperature was maintained at 20 degrees C with a 15-hr photoperiod under a relative humidity of 70%. After this period watering of plants was stopped. Four time notites were sampled during a two week period; the	first after wilting was observed and the last, two weeks later, consisted of live crown and leaf tissue (leaf tissue that was yellow was not included in sampled material) Pirst strand evotthesis in this library was done	in the presence of methylated dCTP thereby protecting internal cleavage with Not1."	Query Match 30.2%; Score 630.6; DB 7; Length 1071; Best Local Similarity 80.0%; Pred. No. 1.9e-115; Matches 790; Conservative 0; Mismatches 191; Indels 6; Gaps 4;	355 CTCTCCTCTCACGCCTACGTGCAGACTCTGGGGCTTTCACATGCGCTCACTTCATTC 414	415 AIGIGGENCIGCGSCCCTAITGCCGGCTTAGTGGTCCAACGCTGGTTGGCCTGTACAGC 474	475 GACAGGIGIACAICGAGAIGGGGGAGACGGAGGCCGIITAICCIGACAGGGIGCAIGCIC 534	535 ATCTGCGTTGCCGTCGTTGTTGTCGGATTCTCGTCAGACATCGGAGCTGCTCTAGGGGAC 594 183 ATCTGCATTGCTGTCGTCGTCGTCGTCTCTCGCTGAGACTGCTCTGGAGCTGCTCTGGGTGAC 242		243 AGCAAGGAAGGAGCTCTCTATCATGGGCCTCGTTGGCACGCTGCAATTGTGTATGTT 302 655 CTGGGGTTTTGGCTCCTTGACTTCTCCAACAACACTGTGCAGGGTCCAGGTGCTATG 714		715 AIGGCIGATCTAIGTGACCATCATGGGCGCAAGTGCGGCTAACTCCATCTTCTTGTTCTTGG 774
REFERENCE AUTHORS TITLE	COMMENT			FEATURES	,				ORIGIN	Que: Best Matc	yo, du	Qy QD	cy do	\$ 65	ζ	음 &	: 원	ò
	OY 1264 AGCTGGTTCCTGATCGAGCCCATGTGCCGGAAGGTCGGGCCGAAGGTGGTGTGGTGAAGG 1323	Oy 1324 AGCAACTTCATGGTCGGCGAGGGCGACGGCGCTGATCAGCTTCTGGTCGCTC 1383	Oy 1384 AGGACTACCACGGTACGTGCAGGACGCCATCACGCGAACGCCAGCATCAAGGCCGTC 1443	Oy 1444 TGCCTCGTCTCTTCGCCTTCCTGGGCGTCCCTCTGCCATCCTGTACAGGGTCCGTTC 1503	Oy [÷] 1504 GCGGTGACGGCGCACCCGGGCGCGCGCGCGCGCCTGTGCACCGGCGTC 1563 	QX 1564 CTCAACATCTCCATCGTCATCCCTCAGGTGATCATCGCGCTGGGCCCGGCCCGTGGGAC 1623 Db 475 CTCAACATCTCCATCGTCATCCCTCAGGTGATCATCGCGTTGGCGCCGGGCCGTGGGAC 416	Oy 1624 GCGCTGTTCGGGAACATCCCGGCGTTCGCCTCGCGTCGCCTTCGCCCTCGTC 1683	Oy 1684 GGCGGCGTCGTGGGCGTGTTCCTGCTGCCCAAGATCTCCAAGCGCCGGTTCCGGGCCGTC 1743	Oy 1744 AGGGGGGGGCCACTGATGGAACCGGGGGGCCGGCGGCCGGC	Qy 1804 GAGCTGTATGTTG-TTGAGAGTTGAACAGAAACCATGCATGTGTGCTTCTGTAGTTCT 1860 238 GAGCTGTATGTTGAGAGTTGAACAGAAACCATGCATGTGTGCTTCTGTAGTTCTGT 179	Oy 1861GITGITIGGECGATGGEGGGTTGCGTGGCGGCGCGCGAGGCGAGGGGGGGG 1918	Qy 1919 CGCGGATCCAAAAAAGGGCCATTCGATCAATCAAGGTGGGAGTACAACTAGACGA 1978 Db 118 CGCGGATCC-AAAAAAGGACCATTCGATCAATGAATGAGTAGAGAGAACTAGACGA 60	QY 1979 TGATGTTCACATCATTTGTCTTTAATACATACGGTTTCTATTGTCTTTAAAAAAAA		LOCUS CK162907 1071 bp mRNA linear EST 05-DEC-2003 DEFINITION FGASO15514 Triticum aestivum FGAS: Library 4 Gate 8 Triticum	ACCESSION CK162907 VEXSION CK162907.1 GI:38992593	SM	Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooldeae; Triticeae; Triticum.

1508

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Gaps

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REFERENCE AUTHORS

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CB647418 ST 08-APR-2003 OSJNED Oryza Sativa (japonica cultivar-group) cDNA clone OSJNED10F12 5', mRNA sequence.
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Oryza sativa (japonica cultivar-group)
Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta,
Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae,
Ehrhartoideae, Oryzae, Oryza.
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/clone_ib="Vector: pBluescript SK-; Site_1: EcoRI; Site_2:
XhoI"
                                                                                                                                                                                                                                                                                                                                                                                                                                 GTCCTCTTCGCCTTCCTGGGCGTCCCTCTCGCCATCCTGTACAGCGTCCCGTCTCGGGA
                                                                                                                                                                                                                                                                                          1390 TACCACGGGTACGTGCAGGACGCCATCACCGCGAACGCCAGCATCAAGGCCGTCTGCCTC
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Pred. No. 1.5e-98;
); Mismatches 30; Indels
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Unpublished (2002)
Contact: Lai, Jinsheng
Contact: Lai, Jinsheng
Waksman Institute, Rutgers University
190 Frelinghuysen Rd., Piscataway, NJ 08854, USA
Tel: 732-445-3801
Fax: 732-445-5735
Email: jlai@waksman.rutgers.edu
Seq primer: T3.
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                    Studras, D. Sacratt, C., Lu, G., Gowda, M., Hatfield, J., Zhou, B., Mazur, E. Jantasuriyarat, C., Lu, G., Gowda, M., Hatfield, J., Zhou, B., Mazur, E. Kudrna, D., Dean, R., Soderlund, C., Wing, R. and Wang, G.
Large-scale identification of ESTs involved in the interaction between rice and Magnaporthe grisea
L Umpublished (2001)
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Arizona Genomics Institute
Biological Sciences West, 448A, P.O. Box 210088, Tucson, AZ
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Email: http://genome.arizona.edu
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Pred. No. 2.8e-97;
0; Mismatches 184; Indels 3
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Plate: 10 row: F column: 12
Seq primer: gta aaa cga cgg cca gtg.
Location/Qualifiers
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FORWARD: gta aaa cga cgg cca gtg
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Best Local Similarity 78.0%;
Matches 663; Conservative (
     (bases 1 to 847)
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1. .654
| organism="Saccharum officinarum"
| mol_type="mRNA"
| db xref="taxon:4547"
| clone="SCEZAD1082D06" |
| /lab_host="MHIDB" |
| /lab_host="MHIDB" |
| /lone="Organ: seedlings inoculated with Gluconacetobacter diazotroficans; Vector: pSportl, Site=1: Sall; Site=2: Motl; An unidirectional cDNA library generated from |
| seedlings inoculated with Gluconacetobacter diazotroficans] cDNA was prepared from polyA+ mRNA using Superscript Plasmid System Kit (Invitrogen). The double-strand cDNAs were fractionated in a sepharose CL-2B 40cm-columns and fragments sizing between 0.8 and
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1 (bases 1 to 654)
Vettore,A.L., da Silva,F.R., Kemper,E.L. and Arruda,P. The libraries that made SUCEST
Genet. Mol. Biol. 24 (1-4), 1-7 (2001)
Contact: Arruda P
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6010, 13083-970, Campinas SP, Brazil Caixa Postal 6010, 13083-970, Campinas SP, Brazil Tel: 55 19 3788 1137 Pax: 55 19 3788 11037 Pax: 55 19 3788 1089 Email: parruda@unicamp.br clone distribution: clone distribution: clone Collection Center (BCCC) into through the Brazilian Clone Collection Center (BCCC) into the Brazilian Clone Collection Center (BCCC) into the Brazilian Clone Collection Center (BCCC) into the Brazilian Clone Collection Center (BCCC) into the Brazilian Clone Collection Center (BCCC) into the Brazilian Clone Collection Center (BCCC) into the Brazilian Clone Collection Center (BCCC) into the Brazilian Clone Collection Collection Collection (BCCC) into the Brazilian Clone Collection Collection (BCCC) into the Brazilian Clone Collection (BCCC) into the Brazilian Clone Collection (BCCC) into the Brazilian Clone Collection (BCCC) into the Brazilian Clone Collection (BCCC) into the Brazilian Clone Collection (BCCC) into the Brazilian Clone Collection (BCCC) into the 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/clone="McSAl74El0"
/dev_stage="12 months post-planting"
/dev_stage="12 months post-planting"
/dev_stage="12"
/clone_lib="Maturing Sugarcane Stem Lambda ZIPLOX Library
(MCS)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Organ: internodes 6-11; Vector: Lambda ZIPLOX; Site_1: Sal1; Site_2: Not1; mRNA was prepared from internodes 6-11 of the sugarcane variety Q17. cDNA was synthesised from a Not1-oligodT primer/adapter using the manufacturers protocols (Life Technologies) and then ligated to a Sal1 adapter to facilitate directional cloning. The cDNA was cloned into the Sal1 and Noti sites of the Lambda ZIPLOX phage vector (Life Technologies). Constructed by Rosanne E. Casu."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1470 CGTCCCCTCCCCATCCTGTACAGCGTCCCCGTGACGGCGCAGCTGGCGGCCAC 1529
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                                                                                                                 Contact: Rosanne E. Casu
Commonwealth Scientific and Industrial Research Organisation
Division of Plant Industry
Long Pocket Laboratories, 120 Meiers Rd, Indooroopilly, QLD,
Australia
                            analysis
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Pred. No. 4.4e-94;
0; Mismatches 79;
                       expressed sequence tag and microarray a Plant Mol. Biol. 52 (2), 371-386 (2003) 22740598
                                                                                                                                                                                                                                                         Tel: 61 7 3214 2364
Fax: 61 7 3214 2881
Email: Rosanne.Casu@csiro.au
Bases 1-77 (GTCGACCCACGCGTCCG): Sall ad
Seq primer: T7 sequencing primer
High quality sequence stop: 705.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Saccharum sp.
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/cultivar="Q117"
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Best Local Similarity 87.5%;
Matches 587; Conservative 0
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Sugarcane Stem Lambda ZIPLOX Library (MCS)
Slone MCSAl74E10 5' similar to PST Type 6, mRNA
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Eukaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnollophyta, Liliopsida, Poales, Poaceae, PACCAD clade, Panicoideae, Andropogoneae, Saccharum.
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Casu, R.E., Grof, C.P.L., Rae, A.L., McIntyre, C.L., Dimmock, C.M. a Manners, J.M.
Identification of a novel sugar transporter homologue strongly expressed in maturing stem vascular tissues of sugarcane by
1.5 Kb were directionally cloned into the vector. Do of each source of RNA and library construction can be obtained at http://sucest.lad.ic.unicamp.br/public"
                                                                                                                                                                                                     3,
                                                                                                                                                Length 654;
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                                                                                                                                           Score 531.8; DB
Pred. No. 1e-95;
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Saccharum sp. cDNA clone
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SM Oryza sativa (japonica cultivar-group)

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;

Ehrhartoideae; Oryzeae; Oryza.

El (bases 1 to 811)

Jantesuriyarat, C., Lu, G., Gowda, M., Hatfield, J., Zhou, B., Mazur, E., Kudrna, D., Dean, R., Soderlund, C., Wing, R. and Wang, G.

Large-scale identification of ESTs involved in the interaction between rice and Magnaporthe grisea

Unpublished (2003)

Londact: Rod Wing

Arizona Genomics Institute

University of Arizona

Biological Sciences West, 448A, P.O. Box 210088, Tucson, AZ
                                                                                                                                                                                                                                                                                                                           811 bp mRNA linear EST 09-APR-2003 COUNEGOIE20.f OSJNEG Oryza sativa (japonica cultívar-group) cDNA CB659941
1587 TCAGGTGATCATCGCGCTGGGCGCCGCGCGCGGGCGCGCTGTTCGGGAAGGGCAACAT 1646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="Leaf"
/dev_stage="3 week"
/lab_host="DH10B"
/clone_lib="0SJNBs"
/note="Vector: pBluescript II KS +; Site_1: EccRI; Site_2:
Xhol; 24 hrs after innoculation with Rice_Blast (C9240-I)"
                                                                       1707 GCTGCCCAAGATCTCCAAGCGCCAGTTCCGGGCCGTCA--GCGCGGGCGGCCACTGATCG 1764
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/db_xref="taxon:39947"
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Tel: 520 626 3967
Fax: 520 621 9288
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Oryza sativa (japonica cultivar-group)
Bukaryota, Viridiplantee, Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzaa.

1 (bases 1 to 843)
Jantasuriyarat, C., Lu, G. Gowda, M., Hatfield, J., Zhou, B., Mazur, E.,
Kudrna, D., Dean, R., Soderlund, C., Wing, R. and Wang, G.
Large-scale identification of ESTs involved in the interaction
Detween rice and Magnaporthe grisea
Unpublished (2003)
Contact: Rod Wing
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XhoI; 24 hrs after innoculation with Rice Blast (C9240-I)"
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/mol type="mRNA"
cultivar="hipponbare"
/db xref="taxon:39947"
/clone="0SJNEd04p08"
University of Arizona
Biological Sciences West, 448A, P.O. Box 210088, Tucson, AZ
85721-0088, USA
Els 520 626 3967
Fax: 520 621 9288
Email: http://genome.arizona.edu
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0; Mismatches 196;
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Plate: 04 row: p column: 08
Seq primer: gta aaa cga cgg cca gtg.
Location/Qualifiers
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/dev_stage="3 week"
/lab_host="DH10B"
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Matches 647; Conservative
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/organism="Sorghum bicolor"
/mol type="mRNA"
/collivar="IS3620c"
/db_xref="IS3620c"
/db_bots="DHJGb-TI phage-resistant E. coli"
/lab_hots="DHJGb-TI phage-resistant E. colina and harvested at 3, 6, 12 and 24 hr following transfer. Roots and leaves were pooled from all time points and RNA isolated.
Double-stranded cDNA was cloned unidirectionally into different Drall sites is CACTGTGTG, 3-prime Drall site is CACTGTGTG, 3-prime Drall site is
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Library constructed by Dr. Yutaka Suzuki and Dr. Sumio Sugano in
Library constructed by Dr. Yutaka Suzuki and Dr. Sumio Sugano in
Library constructed by Dr. Niversity of Tokyo Instriute of Medical
Science; plant material and RNA prepared at Texas A & W University
sequencing done in the Laboratory for Genomics and Bioinformatics.
University of Georgia. Sequence ends have been trimmed to exclude
are presented as their reverse complement and have been trimmed to
exclude polyA.
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Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, PACCAD
clade, Panicoideae, Andropogoneae, Sorghum.
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Klein, K.R., Lidang, C., Sul, F., Sullivan, R., Shah, M., Summer, E.J.,
Eastman, A. and Pratt, L.H.
An EST database from Sorghum: salt-stressed seedlings
Unpublished (2003)
Other ESTE: SS1 33 G11.b1 A012
Contact: Cordonier-Pratt MM
                                                                                                                                                                              1058 TGCCTCCCGGGATGCCGTCCGTGCTCCTCGTGACTGCCATCACCTGGCTTTCGTGGTTCC
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The University of Georgia, Department of Plant Biology
Plant Sciences Building, Rm. 2502, Athens, GA 30602-7271, USA
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Location/Qualifiers
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Fax: 706 583 0210
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CBG78068 T69 bp mRNA linear EST 09-APR-2003 OSJNEE15J24.f OSJNEE Oryza sativa (japonica cultivar-group) cDNA clone OSJNEE15J24 5', mRNA sequence.
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Oryza sativa (japonica cultivar-group)
Bukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
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llarity 94.3%; Pred. No. 2.3e-88;
Conservative 0; Mismatches 25;
Fax: 732-445-5735
Email: jlai@waksman.rutgers.edu
                                                                              Location/Qualifiers
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Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, FACCAD
clade, Panicoideae, Andropogoneae, Zea.
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Lai, J., Dey, N., Kim, C.S., Becraft, P., Larkins, B., Linton, B. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          921 GIGCCIGACGGIAACCCTGAICTICGCCAAGGAGGIGCCGIACAGAGCGAACGAGAACCT
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                                                                                                                                                                                                 TGTGAGGCCTGTGCGAACCTGAAAGGTGCATTTC-TGGTGGCCGTGGTGCTTCCTAGTCCT
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EL01N0327D07.g Endosperm_3 Zea mays cDNA, mRNA sequence.
                                                                                                                                    4
                                                                   Length 638
                                                                                                                                    65; Indels
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Sequencing of the maize endosperm ESTs
Unpublished (2002)
Contact: Lai, Jinsheng
Dr. Joachim Messing's lab
Waksman Institute, Rutgers University
190 Freilinghuysen Rd., Piscataway, NJ 08854, USA
Tel: 732-445-3801
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                                                                       Score 508; DB 6;
Pred. No. 5.7e-91;
0; Mismatches 65;
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CA399941.1 GI:24764779
                                                                          24.3%;
89.2%;
                                                                                                                                           Matches 571; Conservative
                                                                                                            Similarity
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CA399941/c
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AUTHORS
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Gaps

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790 600 850 099 910 720

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SM Oryza sativa (indica cultivar-group)

Eukaryota, Viridiplantee, Streptophyta; Embryophyta, Tracheophyta;

Eukaryota, Viridiplantee, Streptophyta; Embryophyta, Tracheophyta;

Eukaryota, Viridiplantee, Streptophyta; Embryophyta, Tracheophyta;

Enthartoideae, Oryza.

Is (bases 1 to 742)

3 Jantasuriyarat,C., Lu,G., Gowda,M., Hatfield,J., Zhou,B., Mazur,E.,

Rudrna,D., Dean,R., Soderlund,C., Wing,R. and Wang,G.

Large-scale identification of ESTs involved in the interaction

between rice and Magnaporthe grisea

Unpublished (2003)

Contact: Rod Wing

Arizona Genomics Institute

University of Arizona

Belogical Sciences West, 448A, P.O. Box 210088, Tucson, AZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CB618707 742 bp mRNA linear EST 08-APR-2003 OSIIEa02M22.f OSIIEa Oryza sativa (indica cultivar-group) cDNA clone OSIIEa02M22 5', mRNA sequence.
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                                                                                          ACCATCATGGGCCAAGTGCGCCTAACTCCATCTTCTTGGATGGCGCTGGGAAACA
                                                                                                                                                                     recraegaracrecrederrecaeaacaarregeacaeagregrrrecarrecrraaaa
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/mol_type="mRNA"
/cultivar="IR36"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGTCCCTGTGCTTGGTTATAACTCTGATATTTGCCAAGGAAGTTCC
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/dev_stage="3 week"
/lab_host="DHIOB"
/clone_lib="OSIIBB"
/note="Vector: pBluescript II KS
XhoI; Lesion Mimic SPL II"
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Tel: 520 626 3967
Email: http://genome.arizona.edu
PCR PRimers
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BACKWARD: gga aac agc tat gac cat
Plate: 02 row: M column: 22
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clone="OSIIBa02M22"
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Location/Qualifiers
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mol type="mRNA"
cultivar="Nipponbare"
/db_xref="taxon:39947"
/dlone="OSUNBel5J24"
/tlosue_type="Leaf"
/dev stage="3 week"
/dev stage="DH108"
/lab host="DH108"
/lone=lib="OSUNBel5"
/lone=lib="OSUNBel5"
/note="Yector: pBluescript II XS +; Site_1: EcoRI; Site_2: Xhol; 24 hrs after innoculation with Rice Blast (70-15)"
                                              Mazur, E.,
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E 1 (bases 1 to 769)
S Jantsauriyazat, C., Lu, G., Gowda, M., Hatfield, J., Zhou, B., Mazur, E., Kudhna, D., Dean, R., Soderlund, C., Wing, R. and Wang, G.
Large-scale identification of ESTS involved in the interaction
Large-scale identification of ESTS involved in the interaction
Loupublished (2003)
Unpublished (2003)
Arizona Genomics Institute
University of Arizona
Biological Sciences West, 448A, P.O. Box 210088, Tucson, AZ
RS721-0088, USA
Tel: 520 626 3967
Fax: 520 621 9288
Email: http://genome.arizona.edu
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Pred. No. 3.9e-88;
0; Mismatches 172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  FORWARD: gta aaa cga cgg cca gtg
BACKWARD: gga aac agc tat gac cat g
Plate: 15 row: J column: 24
Seg primer: gta aaa cga cgg cca gtg.
Location/Qualifiers
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Best Local Similarity 77.6%;
Matches 597; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                            /dev_stage="12 months post-planting"
/lab_host="Y1090(ZL)"
/clone_lib="Maturing Sugarcane Stem Lambda ZIPLOX Library
(MCS)
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Commonwealth Scientific and Industrial Research Organisation Division of Plant Industry Long Pocket Laboratories, 120 Meiers Rd, Indooroopilly, QLD, Australia
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                                                                                                                      Tel: 61 7 3214 2364
Fax: 61 7 3214 2881
Email: Rosanne.Casu@csiro.au
Bases 1-17 (GTCGACCCACGCGTCCG): Sall adapter
Seq primer: T7 sequencing primer
High quality sequence stop: 719.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 5;
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23.4%; Score 488.8; DB 5
Best Local Similarity 85.3%; Pred. No. 3.9e-87;
Matches 576; Conservative 0; Mismatches 94
                                                                                                                                                                                                                                                                                                                         /organism="Saccharum sp."

/mol_type="mRNA"

/cultivar="017"

/db xref="taxon:15819"

/clone="MCSA179A07"
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MCSA179A07 Maturing Sugarcane Stem Lambda ZIPLOX Library (MCS)
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Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCAD
clade; Panicoideae; Andropogoneae; Saccharum.
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